IDENTIFYING DATA

Information Systems in Management Engineering

Subject	Information Systems in Management Engineering
Code	V12G340V01504
Study programme	Degree in Industrial Organisation Engineering

Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	4th	1st

Teaching language	
Department	
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General description	It IS important stop a student of industrial engineering, understand how the technologies of the information are able to promote the transformation of the traditional industries. By another band, the continuous change and innovation that produces in these technologies has important consequences in the management and in the industrial processes. Examples of emergent technologies how *Cloud *Computing; *Big Date, mobile digital platforms; *Business *Intelligence; and others more traditional how databases / ERP, will be boarded in the course with practical examples of representation and experimentation in the practices of classroom.

Competencies

Code	
B1	CG 1. Know and apply knowledge of basic science and technologies to the practice of industrial engineering.
C19	CE19 Ability to analyze the needs of an organization and processes and appropriate information systems, using the methods, tools and appropriate standards.
C20	CE20 knowledge to make a formal management information systems and communications of an organization
D5	CT5 Information Management.
D6	CT6 Application of computer science in the field of study.

Learning outcomes

Expected results from this subject	Training and Learning Results		
Know the basic concepts envelope the technologies of the information and the communications envelope those that support the systems of information.	B1	C19 C20	D5 D6
I handle of tools stop the storage and treatment of the information.			

Contents

Topic	
1. The systems of information in the current companies and in the training of the engineers	-The systems of information *and the evolution of the businesses -Why the systems of information are *essential stop the current businesses - That are a system of information? How it works? Which are his components? - He paper of wools *people and the organisations -A method in four stages stop the resolution of problems - Skills and competitions stop the management of systems of information

2. And-**Business global and collaboration	- Main aspects that determine he paper of the systems of information in the company - How the systems of information serve the different managerial groups in the company - That attach the systems of information to the improvement of the performance of the organisations - Why are important the systems stop the collaboration and the work in team and that technologies use. Which is he paper of the function of systems of information in the company
3. Purchasing competitive advantages with the systems of information	- Use of the model of competitive strengths of *Porter to help to the companies to *develop competitive strategies using the systems of information - Use of the model of chain of value to help to the companies to identify opportunities stop his strategic applications of the systems of information - *Sinerxías, core of competitions and strategies based in net to reach competitive advantages - Competition to scale global and promotion of the quality to improve the competitive advantages - Management of processes of business (*BPM) and his paper in the improvement of the competitivity
4. Ethical aspects is of the systems of information	- Ethical aspects, social and political that are incumbent to the systems of information - specific Principles of *behaviour that can be used how ethical guides of decision - Challenges put by the new **tecnlogías and internet of face to the protection of the privacy of the individuals and the intellectual property - How affect the systems of information to the daily life
5. Infrastructures of technologies of the information: *Hardware and Software	- Components of an infrastructure of technologies of wool information - What technologies of computers, *hardware, storage of data, entrance and exit, use mainly in the companies - main Types of software that uses in the companies - Main trends in *hardware and software - Aspects more important in the management of the technology of *hardware and software
6. Bases of the intelligence of business (*BI): Databases and management of the information	- Databases **relacionales and organisation of the data - Principles of wool management of databases - Tools and technologies stop he access to the information of the databases to improve he performance of the business and takes it of decisions - He paper of the politics of information and administration of data in the management of the resources of data of the company - Why is @importante he **aseguramiento of the quality of the data in the company
7. Technologies of telecommunications, Internet and *inalámbricas	- Main components of the nets of telecommunication and technologies pin - Means of transmission of telecommunications and types of nets - Internet and technologies of Internet that bear the communications and he and-**Business - Main technologies and standard for nets *inalámbricas, communications and access to Internet - The identification by **radiofrecuencia and nets of sensors *inalámbricos used in the company
8. The security in the systems of information	- Vulnerability of the systems of information to the destruction, abuse and error - The value stop the business of the security and the control - Components of one mark organisational stop the security and the control - Tools and technologies stop safeguards of the resources of information in the organisation
9 Applications of company: The operative excellence and the relations with the clients	- The systems of company and the operative excellence (*ERP) - The chain of supply, planning, production and logistical. Coordination with the providers (*SCM) - The management of wools relate with the clients (*CRM) - Challenges of the applications of company - competitive Advantages attached by the new technologies in the applications of company

10. And-**Commerce: digital Markets, digital goods	- Main aspects that configure the digital markets and the digital goods - Main businesses of the and-**Commerce *and models of income - The transformation of the @mercadotecnia from it and-**Commerce - How affects it and-**Commerce to the transactions between companies - Paper of the **m-**Commerce in the businesses and main applications **m-**Commerce - Main components stop the building of one and-**Commerce
11. It takes IT of decisions and the management of the knowledge	- Different types of decision and processes of decision - Intelligence of business and analytical of business how bear of the takes of decisions -Bear of the systems of information stop a senior efficiency in the takes of decisions **colaborativa - Use of the artificial intelligence in the takes of decisions and management of the knowledge - Types of systems used in the management of the knowledge
12.The building of systems of information and management of projects	- Stages in the resolution of problems to develop new systems of information - alternative Methods to build systems of information - Main methodologies for it *modelización and design of systems - Selection and evaluation of projects of systems of information - Management of projects of systems of information

Planning

	Class hours	Hours outside the classroom	Total hours
Practice in computer rooms	18	18	36
Case studies / analysis of situations	8	8	16
Outdoor study / field practices	0	10	10
Tutored works	0	23.75	23.75
Master Session	24.5	36.75	61.25
Multiple choice tests	0	1	1
Jobs and projects	0	2	2

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Practice in computer rooms	*Proposal *and/the exhibition of practical cases with utilization of wools *tools necessary computings
Case studies / analysis of situations	Study of international *cases, *analysis of video-cases, *answer of questions *and collective debate in forums in internet *and kind *presencial
Outdoor study / field practices	Assistance join *day on *technologies TIC
Tutored works	Realization of one *work practical envelope a subject related with *them *contained of wool subject
Master Session	Lesson **maxistral *participativa, with material of *support *and audiovisual *means. He professor will explain *the different subjects *and points that *conforman he plans, but the wool time will motivate wool active participation in kind, treating of **intercalary he use of *his word with intervals of dialogue professor-student. This active participation **provirá of of the fields; on the one hand, of possible wools *doubts the comments that *could *arise by part of him student how consequence of wool explanation of him professor; by *another, will be he @propio professor *the one who *also *can launch questions *and *formulation of cases *to the auditorium, treating with this element *dinamizador to achieve *answers *and *generate debate that *carry *to the *enrichment of wool exhibition.

Personalized attention

Methodologies	Description
Master Session	Conferences put professor by means of slides of the main subjects
Practice in computer rooms	Current practices tools TIC used with frequency in industrial companies
Case studies / analysis of situations	Resolution of cases proposed pole professor with presentation of kind and active participation of all the students through the discussion
Tutored works	Work in small team developed poles students at the end of the course

Assessment

	Description	Qualification	Training and Learning Results		
Practice in computer rooms	It Will control the assistance and participation in activities exposed us have to specify he teaching	20	B1	C19 C20	D5 D6
Case studies / analysis of situations	It Will evaluate the resolution of one marry in small group and the participation in him subtract of cases through the virtual classroom	20	B1	C19 C20	D5
Tutored works	Realization of one work practical envelope a subject related with the contained of the subject	20	B1	C19 C20	D5 D6
Master Session	See: Proofs type test	0			
Multiple choice tests	Questions type test envelope the contents developed in the subject.	40	B1	C19 C20	D5 D6

Other comments on the Evaluation

You test type test will qualify of 0 to 10 and is necessary to catch up with punctuation of 4 for power be compensated with the rest of evaluations. The assistance to practices in classroom computing is mandatory.ethical Commitment: it Expects that the present student a suitable

ethical behaviour. In the case to detect a no ethical behaviour (copy, *plaxio, utilization of unlicensed electronic devices, and others) will consider that the student does not gather the necessary requirements to

surpass the subject. In this case the global qualification in the present academic course

will be of *suspenso (0.0).

Sources of information

K, Laudon ¬ J, laudon, **Essential of management Information Systems**, 11,

Efrain Turban et al., **Decision Support and Business Intelligence Systems, 8th edition**, 10/E,

Robert S. Kaplan y David P. Norton, **Strategy MAPS,**,

Steven Alter, **Information Systems**, 4,

George M. Marakas, **Modern Data Warehousing, Mining, and Visualization: Core Concepts**,

Andreu R., Ricart J. y Valor J., **Estrategia y Sistemas de Información**,

Recommendations
Subjects that continue the syllabus

Information Systems and Integrated Management Systems/V12G340V01914

Subjects that it is recommended to have taken before

Introduction to Business Management/V12G340V01201
Business Administration and Organization/V12G340V01923
Tools for Organisation and Business Management/V12G340V01921

Other comments

Requirements: To enrol in this subject is necessary to surpass or well be enrolled of all the subjects of the inferior courses to the course in the that is situated this subject.

In case of discrepancies, will prevail the version in Castilian of this guide.